

Patent claims

1.-12. (canceled)

13. (new) A method for producing multi-channel pulse width modulated rectangular pulses, comprising:

discharging a pulse in a plurality of channels in a first period;  
delaying an inception of the pulse by a current dead time, the current dead time kept constant for the first period;  
producing a new dead time for a modulation of a pulse width; and  
overwriting the current dead time with a value of the new dead time at a beginning of either the first or second period.

14. (new) The method according to claim 13, wherein the current dead time separates two consecutive pulses in different channels.

15. (new) The method according to claim 14, wherein the consecutive pulses are within a same period.

16. (new) The method according to claim 13, wherein the new dead time is buffered independently of the current dead time; the current dead time is overwritten with the value of the new dead time at the beginning of the second period.

17. (new) The method according to claim 16, wherein the second period is between the first dead period in a last channel of the first period and an end of the first period.

18. (new) The method according to claim 13, wherein the current dead time is overwritten with the value of the new dead time at the beginning of each period.

19. (new) The method according to claim 13, wherein a maximum pulse width for a channel is set to a duration of the first period divided by a number of channels.

20. (new) The method according to claim 19, wherein the maximum pulse width is half the time duration of the first period for two channels.

21. (new) The method according to claim 13, wherein for n number of channels, after the time duration of the pulse width has elapsed for a maximum pulse width for a first to n-1 channel, an interrupt signal is created and a beginning of the current dead time for the next channel is shown.

22. (new) The method according to claim 21, wherein at the end of the first period a second interrupt signal is generated marking the beginning of a new period or marking the current dead time for a first channel.

23. (new) The method according to claim 22, wherein the second interrupt signal initiates the overwriting of the current dead time.

24. (new) A device for producing multi-channel pulse width modulated rectangular pulses, comprising:  
a plurality of channels within a period, each channel having an equal size;  
a dead time master register;  
a dead time slave register; and  
a new dead time buffered independently of the value stored in the dead time slave register.

25. (new) The device according to claim 24, wherein the value stored in the dead time slave register is overwritten with the value stored in the dead time master register at the beginning of a desired period.

26. (new) The device according to claim 25, wherein the value stored in the dead time slave register is overwritten with the value stored in the dead time master register at the beginning of each period.

27. (new) A method for producing multi-channel pulse width modulated rectangular pulses, comprising:

providing a number of channels within a period, each channel having an equal size;  
inserting a current dead time onto the channel;  
inserting a pulse onto the channel;  
producing a new dead time for a modulation of a pulse width; and  
setting the current dead time to the new dead time after the current dead time has been inserted onto each channel of the period.

28. (new) The method according to claim 27, wherein the number of channels is two.